is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(b) *ASHRAE*. American Society of Heating Refrigerating and Air-Conditioning Engineers, Inc., 1791 Tullie Circle, NE. Atlanta, GA 30329, (404) 636–8400; or go to, *http://www.ashrae.org//*.

(1) ANSI/ASHRAE/IESNA 90.1–2004, (''ASHRAE 90.1–2004''), Energy Standard for Buildings Except Low-Rise Residential Buildings, January 2004, ISSN 1041–2336, IBR approved for §§ 433.2, 433.4, 433.5;

(2) ANSI/ASHRAE/IESNA Standard 90.1–2007, (''ASHRAE 90.1–2007''), Energy Standard for Buildings Except Low-Rise Residential Buildings, 2007, ISSN 1041–2336, IBR approved for §§ 433.2, 433.4, 433.5.

[76 FR 49284, Aug. 10, 2011]

§ 433.4 Energy efficiency performance standard.

(a) (1) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after January 3, 2007, but before August 10, 2012, to:

(i) Meet ASHRAE 90.1–2004, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2004.

(2) All Federal agencies shall design new Federal buildings that are commercial and multi-family high-rise residential buildings, for which design for construction began on or after August 10, 2012, to:

(i) Meet ASHRAE 90.1–2007, (incorporated by reference, see § 433.3); and

(ii) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the ASHRAE Baseline Building 2007.

(b) Energy consumption for the purposes of calculating the 30 percent savings shall include space heating, space cooling, ventilation, service water heating, lighting and all other energy consuming systems normally specified as part of the building design except for receptacle and process loads.

(c) If a 30 percent reduction is not life-cycle cost-effective, the design of the proposed building shall be modified so as to achieve an energy consumption level at or better than the maximum level of energy efficiency that is life-cycle cost-effective, but at a minimum complies with paragraph (a) of this section.

[71 FR 70281, Dec. 4, 2006, as amended at 72 FR 72570, Dec. 21, 2007; 76 FR 49284, Aug. 10, 2011]

§ 433.5 Performance level determination.

(a)(1) For Federal buildings for which design for construction began on or after January 3, 2007, but before August 10, 2012, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2004 and proposed building by using the Performance Rating Method found in appendix G of ASHRAE 90.1–2004 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

Percentage improvement = 100 × ((Baseline building consumption—Receptacle and process loads)—(Proposed building consumption − Receptacle and process loads))/(Baseline building consumption—Receptacle and process loads) (which simplifies as follows):

Percentage improvement = 100 × (Baseline building consumption—Proposed building consumption)/(Baseline building consumption—Receptacle and process loads).

(2) For Federal buildings for which design for construction began on or after August 10, 2012, each Federal agency shall determine energy consumption levels for both the ASHRAE Baseline Building 2007 and proposed building by using the Performance Rating Method found in appendix G of

ASHRAE 90.1–2007 (incorporated by reference, see § 433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

Percentage improvement = 100 × ((Baseline building consumption—Receptacle and process loads)—(Proposed building consumption − Receptacle and process loads))/(Baseline building consumption—Receptacle and process loads) (which simplifies as follows):

Percentage improvement = 100 × (Baseline building consumption—Proposed building consumption)/(Baseline building consumption − Receptacle and process loads).

(b) Each Federal agency shall consider laboratory fume hoods and kitchen ventilation systems as part of the ASHRAE-covered HVAC loads subject to the 30 percent savings requirements, rather than as process loads.

[71 FR 70281, Dec. 4, 2006, as amended at 76 FR 49284, Aug. 10, 2011]

§ 433.6 Sustainable principles for siting, design and construction. [Reserved]

§ 433.7 Water used to achieve energy efficiency. [Reserved]

§ 433.8 Life-cycle costing.

Each Federal agency shall determine life-cycle cost-effectiveness by using the procedures set out in subpart A of part 436. A Federal agency may choose to use any of four methods, including lower life-cycle costs, positive net savings, savings-to-investment ratio that is estimated to be greater than one, and an adjusted internal rate of return that is estimated to be greater than the discount rate as listed in OMB Circular Number A–94 ''Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs.''

PART 434—ENERGY CODE FOR NEW FEDERAL COMMERCIAL AND MULTI-FAMILY HIGH RISE RESIDENTIAL BUILDINGS

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